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EXAMINER

BERMAN, SUSAN W

ART UNIT	PAPER NUMBER
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1711

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DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,283

Applicant(s)

BRADFORD ET AL.

Examiner

Susan W Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 22-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-32 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-21 drawn to a coating composition, classified in class 525, subclass
 - II. Claims 22-31 drawn to a method of coating a substrate, classified in class 427, subclass 407.1.
 - III. Claim 32 drawn to an article, classified in class 428, subclass 411.1.

Distinctness

The inventions are distinct, each from the other because:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product such as composition of inventions I but comprising a reinforcing filler.
3. Inventions I and III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as self-supporting molded article and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious

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variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. Inventions II and III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make other and materially different product such as a substrate coated from a composition different from a composition of claim 1, e.g., a composition of claim 1 but further comprising a reinforcing filler.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Mary E. Golota on October 4, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claim 1-21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 22-32 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently

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named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is advised that claims 22-31, drawn to a method for using the composition of Group I may be rejoined with Group I upon identification of allowable subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The examiner has not found any disclosure within the specification of “epoxy functional materials” or “acrylics” disclosed as being suitable as thermally curable component (a2). See page 12, lines 22 and 23, wherein “epoxy resin-amine adducts” and “(meth)acrylate copolymers” are set forth.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-3, the abbreviation “UV” should be replaced with “ultraviolet (UV)” in the first occurrence because the abbreviation renders the claims indefinite. The abbreviation “UV/TH” should be replaced with “ultraviolet/thermal (UV/TH)” in the first occurrence because the abbreviation renders the claims indefinite.

In claim 1: in the definition of (a11) it is not clear from the phrase “at least one bond ...” what kind of bond is intended to be claimed; in the definition of (a21) it is not clear what kinds of functional groups are intended to be claimed, especially since the functional groups in (a11) have not been clearly identified (see page 8); in the definition of (a21) the kinds of functional groups intended to be claimed are not clearly set forth since the functional groups in (a3) are not clearly defined (see page 12); in the definition of (a31) the kinds of functional groups intended to be claimed are not clearly set forth since the functional groups (a21) are not clearly defined (see page 14). Claim 8 is also considered to be indefinite because the kinds of functional groups are not identified.

In claim 1 the UV/TH “value” is not clearly defined because it is not clear what has been measured to arrive at the ratio “between 0.20 to 0.60”. Is this a ratio of UV curable functional groups to thermal curable functional groups? Is this a ratio of UV cure to thermal cure? Is this some other kind of ratio?

Claim 4 is confusing because it sets forth “polyesters” without mentioning the functional groups and “acrylics” without mentioning the functional groups and also sets forth “epoxy functional materials” without mentioning what kinds of “materials” are suitable.

There is no antecedent basis in claim 8 or in claim 1 for the “NCO” groups recited in claim 9.

In claims 9 and 11-14, the use of the abbreviation “NCO” renders the claim indefinite because the meaning is not clear.

There is no antecedent basis in claim 13, which recites that the ratio is “less than 1.00” for the recitation in claim 14 of a ratio “from 0.75 to 1.00” because 1.00 is not “less than 1.00”.

Claims 15-17: it is not clear what is meant by “nonvolatile weight”. How is a weight “nonvolatile”? Does applicant intend to recite the weight of nonvolatile binder?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 and 8-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lahrman et al (5,425,970) teach that the radiation curable binders in the disclosed compositions can contain further functional groups accessible to chemical crosslinking and that external crosslinking agents can be added. Binders not susceptible to radiation curing and providing a non-radiation-induced curing reaction through functional groups, such as hydroxyl, oxirane or isocyanate, may also be added. The reference specifically teaches adding a binder not susceptible to radiation curing, exemplified by a hydroxyl-functional binder such as an acrylic polymer having hydroxy groups and a polyisocyanate curing agent. See column 5, line 4, to column 7, line 11. Lahrman et al disclose, in Example 6, a composition comprising a urethane acrylate containing hydroxyl functional groups corresponding to applicant's component (a1) and also to applicant's component (a2), acrylate-functional monomers and a polyisocyanate curing agent corresponding to applicant's component (a3) that is irradiated and then heated to provide a high gloss surface.

Lahrman et al teach compositions that may comprise components corresponding to each of (a1), (a2) and (a3) set forth in instant claim 1. Example 6 clearly shows a composition comprising a radiation curable urethane acrylate having hydroxyl functional groups in combination with a polyisocyanate and discloses dual cure of the composition. Lahrman et al do not require employing a radiation curable prepolymer containing further isocyanate-reactive functional groups or selecting a polyisocyanate as the external crosslinking agent or including a non-radiation curable binder having functional groups reactive

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with the isocyanate groups. However, It would have been obvious to one skilled in the art at the time of the invention to provide a composition comprising components corresponding to instantly claimed (a1) and (a3) selected from the prepolymers and crosslinking agents taught by Lahrman et al because such a composition is taught in Example 6. It would further have been obvious to one skilled in the art at the time of the invention to include a non-radiation curable binder containing functional groups reactive with a polyisocyanate, as taught by Lahrman et al in column 6, lines 43, to column 7, line 5, of the disclosure because a polyisocyanate is used as crosslinking agent in Example 6. One of ordinary skill in the art at the time of the invention would have been motivated by the teaching of Lahrman et al to provide a composition curable by radiation and heat to provide an initial gel and avoid sagging on lacquer coated vertical surfaces or to allow flash off of solvents, as taught in column 7, line 44, to column 8, line 34.

Lahrman et al do not mention a ratio corresponding to "UV/TH" set forth in instant claim 1. However, the compositions disclosed would be expected to provide the UV/TH ratio set forth in the instant claims in the absence of evidence to the contrary because the compositions comprise the kinds of functional groups set forth in the instant claims and disclose curing the disclosed compositions with UV radiation and thermal postcuring. Alternatively, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio of UV curable groups to thermally curable groups required to obtain the desired degree of crosslinking in the cured product. With respect to claims 11-14, Lahrman et al do not teach the instantly claimed ratio of NCO groups to isocyanate reactive groups. However, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio required in order to obtain the extent of crosslinking desired for a particular application because chemical crosslinking of isocyanate groups and isocyanate reactive groups is well known in the art. With respect to claims 15-21, Lahrman et al do not mention the polydispersity of the non-radiation curable binder, however, It would have been obvious to one skilled in the art at the time of the invention to select

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thermally curable binder components having these features in order to avoid yellowing upon irradiation and to control the amount of crosslinking.

Claims 1-5, 8-14 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sirkoch et al (4,634,602). Sirkoch et al disclose dual curable compositions comprising a radiation sensitive compound, a radiation insensitive compound containing hydroxyl groups and a crosslinking agent selected from aminoplast resins and blocked isocyanates and a reactive diluent. The radiation sensitive compounds disclosed include ethylenically unsaturated polyurethanes having hydroxy functional groups (columns 2-6). See column 2, lines 46-50, column 3, lines 10-14, lines 52-56 and column 6, lines 15-19. The radiation insensitive compounds disclosed are epoxy resins or phenoxy resins containing at least 40% aromatic ring moieties (columns 7-8). Sirkoch et al teach partially curing the primer composition with radiation, applying a topcoat composition and thermally curing the composite (see Examples 5C, 6 and 7B).

Sirkoch et al do not mention a ratio corresponding to "UV/TH" set forth in instant claim 1. However, the compositions disclosed would be expected to provide the UV/TH ratio set forth in the instant claims in the absence of evidence to the contrary because the compositions comprise the kinds of functional groups set forth in the instant claims and disclose curing the disclosed compositions with UV radiation and thermal postcuring. Alternatively, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio of UV curable groups to thermally curable groups required to obtain the desired degree of crosslinking in the cured product. With respect to claims 11-14, Sirkoch et al do not teach a required ratio of isocyanate groups to reactive functional groups in the disclosed compositions, however, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio required in order to obtain the extent of crosslinking desired for a particular application because chemical crosslinking of isocyanate groups and isocyanate reactive groups and the

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effects thereof are well known in the art. With respect to claims 18-21, Sirkoch et al do not teach the polydispersity of the radiation insensitive compounds, however, It would have been obvious to one skilled in the art at the time of the invention to select thermally curable binder components having these features in order to avoid yellowing upon irradiation and to control the amount of crosslinking.

Claims 1-5, 8-14 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE Patent 00 333 (translation supplied by applicant). DE '333 discloses compositions for SMC and BMC coating comprising component (a1) corresponding to instantly claimed component (a1), component (a2) corresponding to instantly claimed component (a3) and component (a7) corresponding to instantly claimed component (a2). The same tradenamed materials are employed as disclosed in the instantly claimed invention.

DE '333 does not mention a ratio corresponding to "UV/TH" set forth in instant claim 1.

However, the compositions disclosed would be expected to provide the UV/TH ratio set forth in the instant claims in the absence of evidence to the contrary because the compositions comprise the kinds of functional groups set forth in the instant claims and disclose curing the disclosed compositions with UV radiation and thermal postcuring. Alternatively, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio of UV curable groups to thermally curable groups required to obtain the desired degree of crosslinking in the cured product. With respect to claims 11-14, DE '333 does not teach a required ratio of isocyanate groups to reactive functional groups in the disclosed compositions, however, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio required in order to obtain the extent of crosslinking desired for a particular application because chemical crosslinking of isocyanate groups and isocyanate reactive groups and the effects thereof are well known in the art. With respect to claims 18-21, DE '333 does not mention the polydispersity of component a7, however, It would have been obvious to one skilled in the art at the time

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of the invention to select thermally curable binder components having these features in order to avoid yellowing upon irradiation and to control the amount of crosslinking.

Claims 1-5, 8-14 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE Patent 99 141 (translation supplied by applicant). DE '141 discloses compositions for SMC and BMC coating comprising component (a1) corresponding to instantly claimed component (a1), component (a2) corresponding to instantly claimed component (a3) and component (a7) corresponding to instantly claimed component (a2). The same tradenamed materials are employed as disclosed in the instantly claimed invention.

DE '141 does not mention a ratio corresponding to "UV/TH" set forth in instant claim 1. However, the compositions disclosed would be expected to provide the UV/TH ratio set forth in the instant claims in the absence of evidence to the contrary because the compositions comprise the kinds of functional groups set forth in the instant claims and disclose curing the disclosed compositions with UV radiation and thermal postcuring. Alternatively, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio of UV curable groups to thermally curable groups required to obtain the desired degree of crosslinking in the cured product. With respect to claims 11-14, DE '141 does not teach a required ratio of isocyanate groups to reactive functional groups in the disclosed compositions, however, It would have been obvious to one skilled in the art at the time of the invention to determine the ratio required in order to obtain the extent of crosslinking desired for a particular application because chemical crosslinking of isocyanate groups and isocyanate reactive groups and the effects thereof are well known in the art. With respect to claims 18-21, DE '141 does not mention the polydispersity of component a7, however, It would have been obvious to one skilled in the art at the time of the invention to select thermally curable binder components having these features in order to avoid yellowing upon irradiation and to control the amount of crosslinking.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 09/941118.

Although the conflicting claims are not identical, they are not patentably distinct from each other because because components a1, a2 and a3 as recited in claim 1 of S.N. '118 can be the same as components a1, a2 and a3 in S.N. '283. Component a1 comprising at least two radiation activatable functional groups in SN '118 comprises components also containing one or more isocyanate-reactive functional groups, as set forth in claim 6 of SN '118 and in claim 8 of SN '283. Component a3 as defined in claim 1 and claim 4 of SN '118 corresponds to component a3 set forth in claim 1 and claim 5 of SN '283. Component a2 as defined in claims 1 of SN '118 provides component a2 as set forth in claims 1 and 15-17 of SN '283. Also, claims 15-18 of SN '118 set forth ratios of NCO groups to isocyanate groups in the components of the composition that correspond to the ratios set forth in the claims 11-14 of SN '283. It would have been obvious to one skilled in the art at the time of the invention to provide a composition comprising the components a1, a2 and a3 as set forth in the claims of SN '118 corresponding to the compositions set forth in the claims of SN '283.

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This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 09/940748. Although the conflicting claims are not identical, they are not patentably distinct from each other because components a1, a2 and a3 as recited in claim 1 of S.N. '748 can be the same as components a1, a2 and a3 in S.N. '283. Component a1 comprising at least two radiation activatable functional groups and one or more isocyanate-reactive functional groups, as set forth in claim 1 of SN '748, can be the same as component a1 as set forth in claim 1 and claim 8 of SN '283. Component a3 as defined in claim 1 of SN '748 corresponds to component a3 set forth in claim 1 and claim 10 of SN '283. Component a2 as set forth in claim 1 of SN '748 provides component a2 as defined in claims 1, 7 and 10 of SN '283. Also, claims 2-5 of SN '748 set forth ratios of NCO groups to isocyanate groups in the components of the composition that correspond to the ratios set forth in the claims 11-14 of SN '283. It would have been obvious to one skilled in the art at the time of the invention to provide a composition comprising the components a1, a2 and a3 as set forth in the claims of SN '748 corresponding to the compositions set forth in the claims of SN '283.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-21 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of copending Application No. 09/941295. Although the conflicting claims are not identical, they are not patentably distinct from each other because components a1, a2 and a3 as recited in claim 1 of S.N. '295 can be the same as components a1, a2 and a3

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in S.N. '283. Component a1 comprising at least two radiation activatable functional groups in SN '295 comprises components also containing one or more isocyanate-reactive functional groups, as set forth in claim 1 and claim 19 of SN '295 and in claim 1 and claim 8 of SN '283. Component a3 as defined in claim 1 and claim 5 of SN '295 corresponds to component a3 set forth in claim 1 of SN '283. Component a2 as defined in claims 1-4 and 7 and 10 of SN '295 provides component a2 as set forth in claims 1, 4 and 18-21 of SN '283. Also, claims 11-15 of SN '295 set forth ratios of NCO groups to isocyanate groups in the components of the composition that correspond to the ratios set forth in the claims 11-14 of SN '283. It would have been obvious to one skilled in the art at the time of the invention to provide a composition comprising the components a1, a2 and a3 as set forth in the claims of SN '295 corresponding to the compositions set forth in the claims of SN '283.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nativi (4,424,252) discloses compositions having a built-in secondary cure mechanism comprising a urethane (meth)acrylate and a polyisocyanate. One of the secondary cure mechanisms is provided by the urethane links in the urethane (meth)acrylate that react with free isocyanate in the polyisocyanate to form allophanates (column 9, lines 12-20). Surfactants having pendent free hydroxyl groups available to react with free isocyanate in the polyisocyanate can be included in Part A for optimum performance; however, binders containing reactive groups are not mentioned (column 7, lines 5-29). DE 99 141 (translation of Application No. DE19920799 provided by applicant) discloses dual curing coating compositions for coating SMCs and BMCs. Claim 2 sets forth that the functional groups a11 comprise olefinically unsaturated groups or epoxide groups, functional groups a12 comprise hydroxyl groups and

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complimentary functional groups a22 comprise isocyanate groups. See Example 1 and claims 1-5. The difference is that DE '141 does not teach a component having at least two radiation activatable bonds and one or more isocyanate-reactive groups (applicant's a1). Skinner et al disclose interpenetrating dual cure compositions comprising a difunctional radiation sensitive diluent, a saturated polyol and a polyisocyanate. Skinner et al do not teach a radiation curable component containing one or more isocyanate-reactive groups. Palazzotto et al (4,985,340) disclose compositions comprising polyurethane precursors and an ethylenically unsaturated monomer. Palazzotto et al do not teach ethylenically unsaturated monomers containing one or more isocyanate-reactive groups. The disclosed compositions are cured by exposure to radiation or to heat in the presence of two different kinds of photoinitiator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462.

The fax phone numbers for the organization where this application or proceeding is assigned are 703 872 9310 for regular communications and 703 872 9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman
Primary Examiner
Art Unit 1711

SB

November 15, 2002